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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TRAN, TUYETLIEN T

ART UNIT

PAPER NUMBER

2179

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/646,828	Applicant(s) MASUDA, YOSHIHIRO	
	Examiner TUYETLIEN T. TRAN	Art Unit 2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-12,15 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-12,15 and 18-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/14/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the following communication: Amendment filed 5/05/09.

This action is made non-final.

2. Claims 1-4, 6-12, 15, 18-23 are pending in the case. Claims 1, 2, 11, 15, 18-21 are independent claims.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: computer-readable recording medium as recited in claim 18. For the purpose of examination, the examiner interprets the term “computer-readable recording medium” to include only physical storage devices such as CD-ROM, magnetic disks, etc.

Claim Objections

4. Claim 1 is objected to because of the following informalities: the term “a distance, on the display device, between any pair of symbols displayed” in line 15 raises the question of whether the term has antecedent basis. It is noted that in lines 9-10, a symbol is displayed on the display device.

5. Claim 3 is objected to because of the following informalities: it is not clear whether which object “the object of the activity” is referring to because in line 13 of claim 1, it says “an activity that is conducted by two or more objects”.

6. Claim 15 is objected to because of the following informalities: it is suggested that the term “the a non-simulated real space” in line 11 should be changed to “the non-simulated real space”.

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7. Claim 18 is objected to because of the following informalities: the term "a non-simulated real space" in line 12 should be changed to "the at least one non-simulated real space" for the claim language consistency.
8. Claim 19 is objected to for the same reason given above in claim 1.
9. Claim 20 is objected to because of the typographical error: it is suggested that term "an activity is detected hat" in line 13 should be changed to "an activity is detected that".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-4, 6-12, 15, 18 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the at least one non-simulated real space" in line 11.

There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the respective saved activity events" in line 8, "the at least one non-simulated real space" in line 11. There is insufficient antecedent basis for these limitations in the claim.

Claim 4 recites the limitations "the other object" in line 4, "the information" in line 5, "the plural saved activity events" in line 6. There is insufficient antecedent basis for these limitations in the claim.

Claim 10 recites the limitation "the object" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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Claim 11 recites the limitation “the respective saved activity events” in line 10, “the at least one non-simulated real space” in line 13. There is insufficient antecedent basis for these limitations in the claim.

Claim 15 recites the limitation “the respective saved activity events” in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation “the history” in line 2, “the respective objects” in line 6, “the respective activity events” in line 8, “the respective saved activity events” in line 9, “the objects in the work space” in line 12. There is insufficient antecedent basis for these limitations in the claim.

Claims 3-4, 6-10, 13 are rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 1-4, 6-12, 15, 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Schafer et al. (published article, “Virtual Storytelling of Cooperative activities in a Theatre of Work”, 2001; hereinafter Schafer) in view of Broll et al. (“Symbolic Avatar Acting in Shared Virtual Environments”, 06/17/02, hereinafter Broll).**

As to claims 1 and 19, Schafer teaches:

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A work space control apparatus and method for controlling activities conducted by objects in a work space as history (e.g., Abstract and page 192; TOWER offers a stage for social encounters and tells a story about the work process in teams and the current and past activities in a cooperative environment), the apparatus comprising:

a detection device that detects an activity event conducted by each object in the work space including a single non-simulated real space (e.g., Fig. 2 and page 193, 196; wherein a number of different activity sensors are used to capture and recognize user activities in a real environment and wherein sensor are used to recognize user activities performed);

an activity event control device that saves the activity event detected while relating the activity event detected to time for each object during which each object conducts the detected activity event (e.g., page 193 and page 196; wherein event and notification infrastructure – ENI – stores activity events and event data consist of producer of the event, artefact in use, date/time) and a non-simulated real place for each object where each object conducts the detected activity event (e.g., page 194; wherein information landscape represents the context in which the meeting has taken place); and

a display device that displays the saved activity event by displaying a symbol representing the respective object conducting the saved activity event (e.g., pages 193, 194; the symbolic acting module transforms event notifications about user actions into symbolic actions; i.e., animated gestures of the avatars that represent users and their activity in the environment so that users can view the past cooperative activities);

wherein the objects in the work space include a person in the at least one non-simulated real space (e.g., pages 194, 196; user activities in real environment),

the detection device at least detects an activity that is conducted by two or more objects in the single non-simulated real space (e.g., pages 194, 196; recording and replay of events including activities such as meetings, monitoring places with a high density of interaction), and

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Schafer appears to disclose a distance, on the display device, between any pair of symbols displayed that represent a respective pair of objects conducting saved activity events, corresponds to a degree of relation between the pair of objects (e.g., Figs. 3a, 3b and pages 193, 194; wherein Figures 3a,b show the distance between the symbol representing the user who is about to join the meetings and the group symbol and the distance between the symbol representing the same user after she joins the meeting; the distance after the user joins the meeting is closer). Even if Schafer does not disclose the limitation of displaying a distance, on the display device, between any pair of symbols displayed that represent a respective pair of objects conducting saved activity events, corresponds to a degree of relation between the pair of objects, this deficiency is disclosed by Broll; wherein Broll teaches a symbolic avatar acting in shared virtual environments that allows mutual awareness in virtual teams of between remote users by symbolic character representations (e.g., see page 4). Broll teaches a distance, on the display device, between any pair of symbols displayed that represent a respective pair of objects conducting saved activity events, corresponds to a degree of relation between the pair of objects (e.g., see page 5; if two users are talking in the coffee room, their avatars also move to the corresponding virtual counterpart).

Accordingly, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the virtual storytelling of cooperative activities of Schafer to include the feature of displaying symbolic representations of the objects conducting activity events corresponding to the relation between the objects as taught by Broll to achieve the claimed invention. One would be motivated to make such a combination is because mutual awareness in virtual teams or between remote users can be increased and to enhance the communication between distributed users represented by avatars (e.g., see Broll page 4, section "3 Application Scenarios").

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As to claims 2, 15, 18, 20, Schafer teaches:

A work space control apparatus and a method for controlling activities conducted by objects in a work space as history (e.g., Abstract and page 192; TOWER offers a stage for social encounters and tells a story about the work process in teams and the current and past activities in a cooperative environment), the apparatus comprising:

a detection device that detects an activity event conducted by each object in the work space including a single non-simulated real space (e.g., Fig. 2 and page 193, 196; wherein a number of different activity sensors are used to capture and recognize user activities in a real environment and wherein sensor are used to recognize user activities performed);

an activity event control device that saves the detected activity event, which is conducted by each object, in association with each object (e.g., page 193 and page 196; wherein event and notification infrastructure – ENI- stores activity events and event data consist of producer of the event, artefact in use, date/time); and

a display device that specifies objects conducting the respective saved activity events, and displays a symbol representing each activity event and symbols representing the specified objects which conduct each activity event (e.g., Figs. 3a, 3b, pages 193, 194; the symbolic acting module transforms event notifications about user actions into symbolic actions; i.e., animated gestures of the avatars that represent users and their activity in the environment so that users can view the past cooperative activities; the displayed objects includes symbol representing documents related to the meeting and avatars representing objects conducted the activity event),

wherein the objects in the work space include a person in the at least one non-simulated real space (e.g., pages 194, 196; user activities in real environment),

the detection device at least detects an activity that is conducted by two or more objects in the single non-simulated real space (e.g., pages 194, 196; recording and replay of events

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including activities such as meetings, monitoring places with a high density of interaction) and saves a link to another object that conducts the detected activity event together, in association with each object (e.g., see pages 194, 196; wherein event data includes producers of the event, artefact in use, performed operation; therefore, objects that have the same performed operation value are linked together), and

Schafer appears to disclose a distance, on the display device, between any pair of symbols displayed that represent a respective pair of objects conducting saved activity events, corresponds to a degree of relation between the pair of objects (e.g., Figs. 3a, 3b and pages 193, 194; wherein Figures 3a,b show the distance between the symbol representing the user who is about to join the meetings and the group symbol and the distance between the symbol representing the same user after she joins the meeting; the distance after the user joins the meeting is closer). Even if Schafer does not disclose the limitation of displaying a distance, on the display device, between any pair of symbols displayed that represent a respective pair of objects conducting saved activity events, corresponds to a degree of relation between the pair of objects, this deficiency is disclosed by Broll as set forth in the rejection of claim 1 and therefore, combining Broll and Schafer would meet the claimed limitations for the same reasons as set forth in claim 1.

As to claim 11, claim 11 is rejected under similar rationale given above with respect to claim 2 and including the following:

Schafer teaches a work space history saving device that saves the detected activity event for each work space of the activity event (e.g., Figs. 2, 3a, 3b and pages 193, 194; wherein the 3D space is created dynamically and adapts existing spaces to the actual usage and work behavior of the users that populate these spaces). Therefore, combining Broll and Schafer would meet the claimed limitations for the same reasons as set forth in claim 1.

As to claim 21, claim 21 is rejected under similar rationale given above with respect to claim 2 and including the following:

Schafer appears to teach displaying symbols representing a plurality of the saved activity events of one object in a time series manner simultaneously (e.g., see page 194, 195; the documents related to the meeting displayed in the last screenshot of the meeting; all activities which have taken place during the selected time period). Even if Schafer does not disclose this feature, Broll teaches this limitation wherein Broll teaches displaying symbols representing a plurality of the saved activity events of one object in a time series manner simultaneously (e.g., see page 5; the avatar's behavior represents the activity of its owner symbolically such as a paper symbol representing a document; downloading/uploading documents). Therefore, combining Broll and Schafer would meet the claimed limitations for the same reasons as set forth in claim 1.

As to claim 3, Schafer further teaches actual body acquiring means for acquiring actual body information of the object of the activity according to the activity event saved by the activity event control means (e.g., pages 193, 196; wherein activity sensors include movement and acoustic sensors to sense the presence of people in a room).

As to claim 4, Schafer teaches the activity event control means saves the detected activity event (e.g., pages 194, 196; recording and replay of events including activities such as meetings, monitoring places with a high density of interaction) while the detected event can be referred from the other object for each object of the activity event being accompanied by the information of the activity time (e.g., see pages 194, 196; wherein event data includes producers of the event, artefact in use, performed operation, date/time, therefore, objects can be referred using the performed operation value, date/time); and the activity event display means displays a

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plurality of the saved activity events in a time series (e.g., see page 194, 195; the documents related to the meeting displayed in the last screenshot of the meeting; all activities which have taken place during the selected time period). In addition, Broll also teaches this limitation wherein Broll teaches the activity event display means displays a plurality of the saved activity events in a time series (e.g., see page 5; the avatar's behavior represents the activity of its owner symbolically such as a paper symbol representing a document; downloading/uploading documents). Therefore, combining Broll and Schafer would meet the claimed limitations for the same reasons as set forth in claim 1.

As to claim 6, Schafer further teaches a capture input device photographs captured data of the activity conducted in the work space (e.g., pages 194, 197, 198; screenshot and documents related to a meeting is recorded and replayed), wherein the activity event control means controls the captured data corresponding to the activity event so as to supply captured data as a display output corresponding to the activity event (e.g., page 194, 197; the activity events are recorded and displayed).

As to claim 7, Schafer further teaches wherein the detection device detects a change in a set of the user objects in the activity event, and the activity event control device saves an activity as a different activity event each time the change is detected (e.g., pages 194, 196, 197; activities such are detected and recorded such as editing a document, upload/download a document).

As to claim 8, Schafer further teaches an object access device that starts a predetermined processing motion responding to that the actual body acquiring device has made access to actual body information of an object (e.g., page 194, 196, 197; sensors can be used to detect the presence of people in a meeting room and displayed accordingly).

As to claim 9, Broll teaches a warning device that outputs a warning to a user when a predetermined state is detected by the detection device (e.g., see page 5; events are detected and inform other people directly). Therefore, combining Broll and Schafer would meet the claimed limitations for the same reasons as set forth in claim 1

As to claim 10, Schafer further teaches wherein the object includes a document used in the work space (e.g., pages 194, 196, 197; activities such are detected and recorded such as editing a document, upload/download a document).

As to claims 12, 22, Schafer appears to teach wherein the activity event display means displays an activity event by displaying objects arranged in a positional relation based on the degree of relation between the objects (e.g., Figs. 3a, 3b and pages 193, 194; wherein Figures 3a,b show the distance between the symbol representing the user who is about to join the meetings and the group symbol and the distance between the symbol representing the same user after she joins the meeting; the distance after the user joins the meeting is closer). Even if Schafer does not disclose this limitation, this deficiency is disclosed by Broll as set forth in the rejection of claim 1; and therefore, combining Broll and Schafer would meet the claimed limitations for the same reasons as set forth in claim 1.

14. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schafer and Broll as applied to claim 1 above and further in view of Cohen et al. (US 2003/0167281 A1; hereinafter Cohen).

As to claim 23, Schafer and Broll teach the limitations of claim 1 for the same reasons as set forth above. Schafer further teaches displaying symbol representing a document on the display device (e.g., see page 194 and Figs. 3a, b; where paper symbol representing the

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document related to the meeting is displayed); Schafer suggests that it is vital for teams to be able to access records of dictions made, minutes of meetings, document history (e.g., see page 193), Schafer and Broll do not teach selecting a symbol representing the object on the display causes a document representing the object to be displayed on the display. This limitation is disclosed by Cohen (e.g., see Figs. 11-14, [0054]). Accordingly, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the virtual storytelling of Schafer and Broll to include the feature of selecting a symbol representing the object on the display causes a document representing the object to be displayed on the display as suggested by Cohen to achieve the claimed invention. One would be motivated to enhance the collaborative working environment.

Response to Arguments

15. Applicant's arguments filed on 5/05/09 have been considered but are moot in view of new ground of rejection.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action.

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TuyetLien (Lien) T. Tran whose telephone number is 571-270-1033. The examiner can normally be reached on Mon-Friday: 7:30 - 5:00, off on alternating Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. T. T./
Examiner, Art Unit 2179

/Weilun Lo/
Supervisory Patent Examiner, Art Unit 2179